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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/628,824	07/31/2000	Kazuhito Takai	P/289-157	5154

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EXAMINER

MOORTHY, ARAVIND K

ART UNIT PAPER NUMBER

2131

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/628,824

Applicant(s)

TAKAI, KAZUHITO

Examiner

Aravind K Moorthy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-19 are pending in the application.
2. Claims 1-19 stand being rejected.

#### ***Response to Amendment***

3. The examiner approves the grammatical changes made to the claims.
4. The examiner approves the replacement set of drawings.
5. The examiner approves the amendment made to the abstract.

#### ***Response to Arguments***

6. The applicant has included a copy of the SB08 filed August 4, 2003 and art listing form filed October 12, 2000. The examiner has considered and acknowledged these cited reference.
7. The applicant has submitted certified copies of all the priority documents in this case. The examiner has received and acknowledged all of the priority documents in this case.
8. Applicant's arguments filed 6/9/04 have been fully considered but they are not persuasive.

On page 17, the applicant argues that there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or combine references to arrive at the claimed subject matter.

The examiner respectfully disagrees. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art.

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See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

As to independent claims 1 and 12, on page 17, the applicant argues that the prior art references in the office action fail to disclose applicant's system and method for synchronizing test data streams to video streams using digital watermark information.

The examiner respectfully disagrees. Tsukagoshi was used to teach recovering text data stream (i.e. subtitle headers) from a digital video stream. Ogino et al was used to teach embedding a digital watermark in the digital video stream, and detecting the watermark. The combination as formed teaches a method for synchronizing text data streams to video streams using digital watermark information.

On page 17, the applicant argues that the feature "in response to the detection of said digital watermark" is not shown in either the Tsukagoshi or Ogino et al references.

The examiner respectfully disagrees. The combination as formed teaches the above-mentioned feature.

On page 18, the applicant argues that the synchronizer disclosed in Tsukagoshi is not a synchronizer for synchronizing in response to the digital watermark.

The examiner respectfully disagrees. The combination as formed teaches the above-mentioned feature.

On page 18, the applicant argues that to properly reject the Applicant's claims for obviousness in view of a combination of prior art references, the office action must establish that a person of ordinary skill in the art would have been motivated to combine the cited references and, in combining them, would have arrived at the invention claimed by the Applicant.

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The examiner respectfully disagrees. The examiner has shown how the teaching of Ogino et al modified the invention of Tsukagoshi. The combination of both references has been shown with proper motivation.

On page 19, the applicant argues that regardless of its source, or the form it takes, a motivation must be clearly and particularly shown.

The examiner respectfully disagrees. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, using digital watermarks deters piracy and helps to protect owner's rights to digital material.

On page 20, the applicant argues that the office action fails to present a reference in which the synchronization of the text and video stream are in response to the detection of a digital watermark in the video stream.

The examiner respectfully disagrees. See arguments above.

On page 20, the applicant argues that the office action may be attempting to take official notice that the synchronizing of the text and video streams could be done in response to the detection of a digital watermark in the video stream.

The examiner respectfully disagrees. The examiner asserts that nowhere in the office action did the examiner take official notice that the synchronizing of the text and video streams could be done in response to the detection of a digital watermark in the video stream.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3, 7-9, 10, 12-14, and 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,742,352 to Tsukagoshi in view of U.S. Pat. No. 6,571,220 to Ogino et al.

10. Regarding Claims 1, 10 and 12, Tsukagoshi discloses:

- A digital video communication system and/or method (Tsukagoshi: Fig. 1) and/or a digital television receiver (Tsukagoshi: column 13, lines 2-11) comprising:
  - A multiplexer and/or step of multiplexing for multiplexing a text data stream with a video stream to produce a multiplexed signal (Tsukagoshi: “Multiplexer 58” of Fig. 1 and column 5, lines 32-35).
  - A demultiplexer and/or step of demultiplexing for demultiplexing the multiplexed signal for recovering said digital video stream and said text data stream (Tsukagoshi: “Demultiplexer 1” of Fig. 6 and column 12, lines 30-35);

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- A synchronizer and/or step of synchronizing for synchronizing the recovered text data stream to the recovered digital video stream (Tsukagoshi: column 13, lines 34-48).

However, Tsukagoshi does not disclose that embedding a digital watermark in the digital video stream, and detecting the watermark, and that the synchronization of the two streams is in response to the detection of the watermark.

Ogino discloses:

- An embedding circuit for embedding a digital watermark in a digital video stream to produce a watermarked digital video stream (Ogino: “WM Superimposing Unit 27” of Fig. 3 and column 8, lines 31-34).
- A digital watermark detector for detecting the digital watermark embedded in the recovered digital video stream (Ogino: Fig. ’s 2 and 4 and column 9, lines 22-31);

Tsukagoshi could have been modified by Ogino to arrive at the claimed invention. Tsukagoshi could include the watermark embedding and detection disclosed by Ogino. Furthermore, the synchronizing of the text and video streams could be in response to the detection of a digital watermark in the video stream.

One of ordinary skill in the art would have been motivated to make the above system, at the time of the claimed invention, because using digital watermarks deters piracy and helps to protect owners rights to digital material.

11. Regarding Claims 2 and 13, the system and receiver of Tsukagoshi and Ogino, as applied to Claims 1 and 12 above, discloses all of the claimed subject matter of Claims 1 and 12, as

discussed with respect to Claims 1 and 12 above. Also, note that the additional claimed subject matter of Claims 2 and 13 is disclosed by Tsukagoshi of the above system:

- The system and/or receiver further comprising a digital overlay circuit for superimposing the synchronized text data stream with the recovered digital video stream (Tsukagoshi: Fig. 6 and column 12, lines 66-67 and column 13, lines 1-2).

Regarding Claims 3 and 14, the system and receiver of Tsukagoshi and Ogino, as applied to Claims 1 and 12 above, discloses all of the claimed subject matter of Claims 1 and 12, as discussed with respect to Claims 1 and 12 above. Also, note that the additional claimed subject matter of Claims 3 and 14 is disclosed by Tsukagoshi of the above system:

- Said synchronizer comprises a memory (Tsukagoshi: "Memory 6" of Fig. 6 and column 12, lines 57-63).

12. Regarding Claims 7 and 18, the system and receiver of Tsukagoshi and Ogino, as applied to Claims 1 and 12 above, discloses all of the claimed subject matter of Claims 1 and 12, as discussed with respect to Claims 1 and 12 above. Also, note that the additional claimed subject matter of Claims 7 and 18 is disclosed by Ogino of the above system:

- A copy protect circuit responsive to the dedicated digital watermark for producing a copy management signal (Ogino: column 7, lines 52-67; column 8, lines 1-6; Fig. 9 and column 11, lines 65-67 and column 12, lines 1-37); and
- An embedding circuit for embedding the copy management signal in the recovered digital video stream as a second digital watermark for preventing illegal duplication of the digital video stream (Ogino: Fig. 6 and column 10, lines 61-64).



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13. Regarding Claims 8 and 19, the system and receiver of Tsukagoshi and Ogino, as applied to Claims 1 and 12 above, discloses all of the claimed subject matter of Claims 1 and 12, as discussed with respect to Claims 1 and 12 above. Also, note that the additional claimed subject matter of Claims 8 and 19 is disclosed by Ogino of the above system:

- Means for converting the detected digital watermark to a second digital watermark (Ogino: “WM Rewriting Circuit 207” of Fig. 6, “ Fig. 7, and column 11, lines 3-10 ; and
- An embedding circuit for embedding the second digital watermark in the recovered digital video stream (Ogino: “WM Superimposing Unit 38” of Fig. 7, column 11, lines 10-16).

14. Regarding Claim 9, the system and receiver of Tsukagoshi and Ogino, as applied to Claim 1 above, discloses all of the claimed subject matter of Claim 1, as discussed with respect to Claim 1 above. Also, note that the additional claimed subject matter of Claims 8 and 19 is disclosed by Ogino of the above system:

- A video compression circuit for compressing the watermarked digital video stream to supply an MPEG-2 transport stream to said multiplexer (Ogino: “Encoder 205” of Fig. 6 column 10, lines 28-31);
- An encryption circuit for encrypting the multiplexed signal (Ogino: column 9, lines 59-65);
- A forward error correction (FEC) encoder for encoding the encrypted signal (Tsukagoshi: column 5, lines 35-39);

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- An FEC decoder for decoding the encoded signal to recover an encrypted signal (Tsukagoshi: "Demultiplexer 1" of Fig. 6 and column 12, lines 20-24);
- A decryption circuit for decrypting the encrypted signal to recover a multiplexed signal of said MPEG-2 transport stream and said text data stream and supplying the multiplexed signal to said demultiplexer, whereby the MPEG-2 transport stream and said text data stream are individually recovered by said demultiplexer (Ogino: "Descrambler 12" of Fig. 2; "; and
- A video expansion circuit for expanding the MPEG-2 transport stream recovered by said demultiplexer to supply a signal corresponding to said watermarked digital video stream to said watermarked detector (Ogino: "Video Data Decoder 108" of Fig. 10 and column 13, lines 25-35).

15. Claims 4-6, 10 and 11, and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the system of Tsukagoshi and Ogino, as applied to Claims 1, 10, and 12 above, and further in view of U.S. Pat. No. 4,920,407 to Stoddard.

16. Regarding Claims 4, 11, and 15, the system and receiver of Tsukagoshi and Ogino, as applied to Claims 1 and 12 above, discloses all of the claimed subject matter of Claims 1 and 12, as discussed with respect to Claims 1 and 12 above. However, the above system does not disclose that the memory is a dual-mode memory.

Stoddard discloses:

- A synchronizer comprises a dual-mode memory (Stoddard: Fig. 1 and column 2, lines 21-51).

The system of Tsukagoshi and Ogino could have been modified by Stoddard to arrive at the claimed invention by using the dual-mode memory for synchronizing the data streams as disclosed by Stoddard. Also, the text data stream disclosed by the above system of Tsukagoshi and Ogino could be stored and read from memory as disclosed by Stoddard.

One of ordinary skill in the art would have been motivated to make the above modification because the use of dual-memory allows simultaneous reading and writing, thereby improving the previous system.

17. Regarding Claims 5 and 16, the system and receiver of Tsukagoshi and Ogino, as applied to Claims 1 and 12 above, discloses all of the claimed subject matter of Claims 1 and 12, as discussed with respect to Claims 1 and 12 above. However, the above system does not disclose that the memory is a dual-mode memory.

Stoddard discloses:

- A synchronizer comprises a pair of first and second memories and a control circuit for alternatively operating the first and second memories in write and read modes (Stoddard: Fig. 1 and column 2, lines 21-51).

The system of Tsukagoshi and Ogino could have been modified by Stoddard to arrive at the claimed invention by using the pair of memories for synchronizing the data streams as disclosed by Stoddard. The system could further be modified such that the alternate operation of the read and write modes could be in response to a detected digital watermark.

One of ordinary skill in the art would have been motivated to make the above modification because the use of first and second memories allows simultaneous reading and writing. Furthermore, the motivation for only alternating the reading and writing of memories in

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response to a detected digital watermark is that if there is no detected digital watermark, there will be no need to synchronize the data, and so the synchronization would waste be unnecessary.

18. Regarding Claims 6 and 17, the system and receiver of Tsukagoshi, Ogino, and Stoddard, as applied to Claims 5 and 16 above, discloses all of the claimed subject matter of Claims 5 and 16, as discussed with respect to Claims 1, 5, 12 and 16 above. Also, note that the additional claimed subject matter of Claims 6 and 17 is disclosed by Tsukagoshi of the above system:

- A digital overlay circuit for superimposing the text data stream read out of each of said first and second memories with the recovered digital video stream (Tsukagoshi: Fig. 6 and column 12, lines 66-67 and column 13, lines 1-2).

### *Conclusion*

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

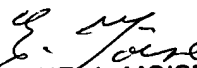
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K Moorthy whose telephone number is 571-272-3793. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aravind K Moorthy  
December 6, 2004

  
EMMANUEL L. MOISE  
PRIMARY EXAMINER  
